



CHE Division Office Hour

Major Research Instrumentation (MRI) September 21, 2023

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MRI Funding Opportunity: [23-519](#)
MRI webpage for [more information](#)



First things, first...

Upcoming Submission Window

October 16, 2023 – November 15, 2023

Due by Wed, Nov 15 before 5PM (submitter's local time)

MRI Funding Opportunity: [23-519](#)

Proposal & Award Policies and Procedures Guide: [PAPPG 23-1](#)

SciENCv (**new!**): [Documents Required for Senior Personnel](#)

Future Submission Windows

October 15, 2024 - November 15, 2024

October 15, 2025 - November 14, 2025

October 15, 2026 - November 16, 2026

MRI Program Goals

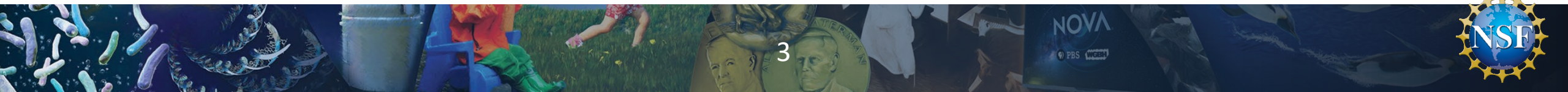
To increase access to **multi-user** scientific and engineering instrumentation for research and research training

The **acquisition** or **development** of a research instrument or components that when combined serve as **an integrated** research instrument

to **acquire** critical research instrumentation without which advances in fundamental science and engineering research may not otherwise occur.

to **develop** next-generation research instruments that open new opportunities to advance the frontiers in science and engineering research.

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MRI Tracks and Submission Limits

Track 1 MRI proposals are those that request funds from NSF greater than \$100,000¹ and less than \$1,400,000.

Track 2 MRI proposals are those that request funds from NSF greater than or equal to \$1,400,000 up to and including \$4,000,000.

Track 3 MRI proposals are those that request funds from NSF greater than or equal to \$100,000¹ and less than or equal to \$4,000,000 that include the purchase, installation, operation, and maintenance of equipment and instrumentation to conserve or reduce the consumption of helium.

...no more than two (2) submissions in Track 1 and no more than one (1) submission in Track 2. For the newly defined Track 3, no more than one (1) submission per competition is permitted.

As a result, it is now possible for an institution to submit up to four MRI proposals within the Track limits as described above.

Track 1 proposals requesting funds from NSF less than \$100,000 will be accepted only from: a) eligible performing organizations requesting instrumentation supporting research in the disciplines of mathematics or social, behavioral and economic sciences; or b) non-Ph.D.-granting institutions of higher education requesting instrumentation supporting research in any NSF-supported disciplines

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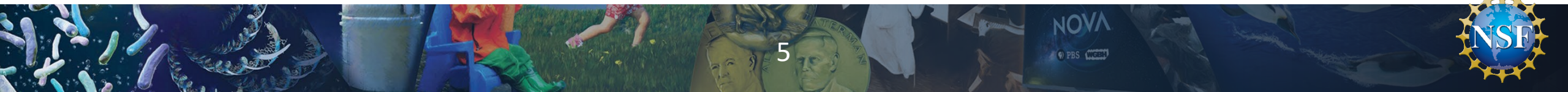
Cost-sharing

CHIPS and Science Act of 2022

The "Creating Helpful Incentives to Produce Semiconductors (CHIPS) and Science Act of 2022", waives cost-sharing requirements for the MRI Program for a period of 5 years. NSF is implementing the waiver for new submissions beginning with the FY 2023 MRI competition.

The maximum MRI request from NSF remains \$4 million. Since **voluntary cost sharing is not permitted**, the maximum total project cost of proposed projects is also \$4 million.

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Track 3 and Helium-related Proposals

CHIPS and Science Act of 2022

MRI will accept requests that include the acquisition, development, installation, operation, and maintenance of equipment and instrumentation to reduce consumption of helium.

Consistent with the goals of the MRI Program, support for such requests will be limited to equipment and instrumentation that serve shared-use research instrumentation.

Such a request may be part of a Track 1 or Track 2 proposal (within the budgetary limits that apply to those tracks) or be **requested separately** as a "Track 3" proposal.

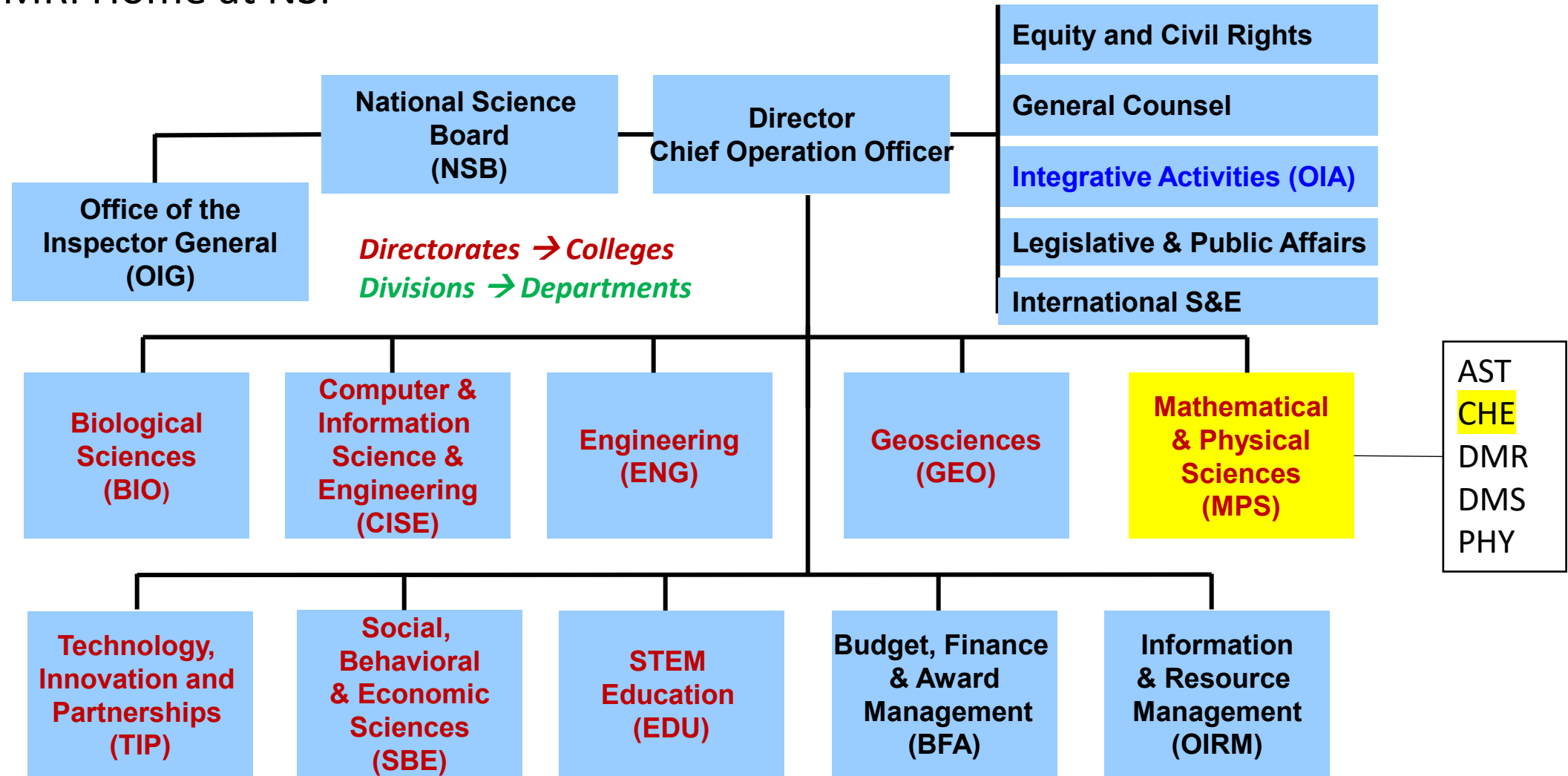
*Proposals in Track 1 and Track 2 that request support for an instrument that requires the use of helium **must describe plans for the conservation, and/or recovery and reuse of helium**; Plans to submit a separate Track 3 proposal are not sufficient for this purpose.*

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MRI Review Process

Finding an MRI Home at NSF



Preparing a compelling MRI proposal

Carefully address the MRI Solicitation Requirements and Merit Review Criteria

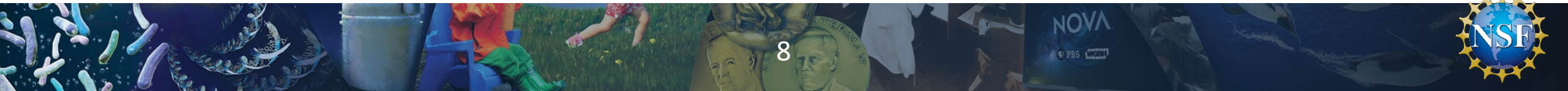
Within the evaluation criteria stated above [Intellectual Merit and Broader Impacts], the reviewers will assess the following:

The extent to which the *proposed project* will make a substantial improvement in the organization's capabilities:

- to **conduct leading-edge research**,
- to provide **research experiences for undergraduate students** *using* leading-edge capabilities, and
- to **broaden the participation** in science and engineering research (especially as lead PIs) by women, underrepresented minorities, persons with disabilities and/or early-career investigators.

...does not support instrumentation used *primarily* for **science and engineering education courses and outreach**, or enables research that is primarily outside of NSF-supported fields of science and engineering; however the instrument's use in those activities may occur at a secondary level and serve as **broader impacts**.

MRI Funding Opportunity: [23-519](#)



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Preparing a compelling MRI proposal

Instrument Management Plan

Given the often-high costs and complexities of operating, maintaining and scheduling major research instrumentation, investigators ***must*** provide detailed business/management plans.

Institutional Letter

Include a letter documenting the performing institution's commitment to ensuring successful operations and maintenance over the expected lifetime of the instrument.

Data Management Plan

A plan for managing data that will be generated by the instrument is required so that users, as needed, can more easily meet NSF's data management requirements. Please see the PAPPG for further information

Other – Organization classification, post-doc mentoring, plan, etc..

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What could make an MRI proposal competitive?

Build your case on its merits

What is the intellectual merit of the proposed activity?

What are the broader impacts of the proposed activity?

Science drives the request

Describe (enthusiastically) compelling research / research training activities to be undertaken **with the instrument**.

Demonstrate how your activities will make meaningful contributions within and across disciplines in both research and research training.

Establishing a need is usually not enough. Everyone needs the best instrument. Ask for what you need, no more no less.

Match your proposed effort to the mission of your institution and describe it in that context. **You are competing against your peer institutions**, and MRI awards build institutional capacity...

Demonstrate appropriate leadership and commitment to make the project a success.

How would the project enable the integration of research and education?

How would the project enable integrating diversity into NSF programs, projects, and activities?

Think like a reviewer!



Award Portfolio

Magnetic Resonance

Mass Spectrometry/Separations

Spectroscopy/Microscopy

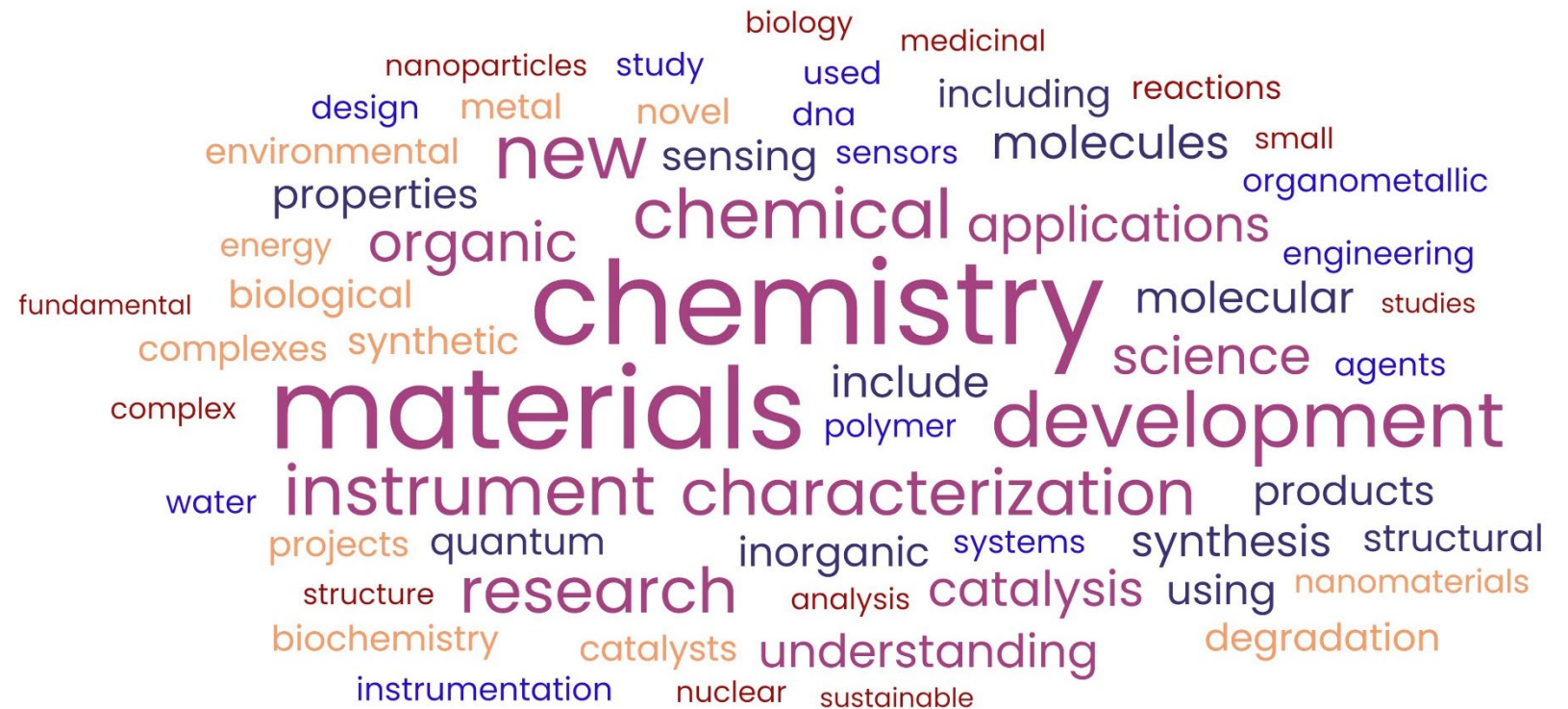
Diffraction

Track 3

North Carolina State University

University of Toledo

West Virginia University



<https://www.nsf.gov/awardsearch/>

For more information

CAREFULLY READ THE SOLICITATION*

MRI Funding Opportunity: [23-519](#)

MRI webpage for [more information](#) and Sept 2023 Town Hall [recording](#)

NEW! Helium Conservation Equipment Frequently Asked Questions ([23-155](#))

NSF Award Search

Proposal & Award Policies and Procedures Guide: [PAPPG 23-1](#)

SciENCv (**new!**): [Documents Required for Senior Personnel](#)

Reach out to the CHE MRI Program Director Team

Consider serving as a reviewer for MRI and other CHE programs



Due by Wed, Nov 15 before 5PM (submitter's local time)

Thank you!

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CLP Oct 13!



The MRI Program does not typically fund common, general-purpose ancillary equipment that would normally be found in a laboratory and/or is relatively easily procured by the organization.

The Program does not support research, education or outreach activities that are enabled by the requested instrumentation, nor does MRI support requests for multiple independent instruments.

The MRI program will NOT support proposal requests that include the following:

Construction, renovation or modernization of rooms, buildings or research facilities.

Sustaining infrastructure and/or building systems.

MRI also does not support instrumentation used primarily for science and engineering education courses and outreach, or enables research that is primarily outside of NSF-supported fields of science and engineering

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